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Method Summary**Determination of Sulphide in Aqueous Samples and Waste water by Spectrophotometry****Scope and Range**

This method can be used to determine sulphide in waters, and is validated and accredited to ISO 17025 for tap water, groundwater, industrial and sewage effluents (both treated and untreated), and saline waters.

LOD is 0.01 mg/l

Range is 0.01-2.0 mg/l

References

Sulphide in Waters and Effluents 1983 (Tentative Methods) HMSO 1983, ISBN 011 7517186

AWWA/APHA 20th Ed. Methods 4500B & C

MEWAM Sulphide in waters & effluents 1983

Second Site Property Method 18.10

Principle

The colourless preserved sample is reacted with dimethyl-p-phenylenediamine hydrochloride to form an intermediate compound, which turns to leucomethylene blue. Leucomethylene blue is then oxidised by iron (III) ions to form methylene blue, which is measured spectrophotometrically at 660 nm.

The result can additionally be expressed as sulphide as H₂S (mgH₂S/l) but this calculation is not accredited.

Interferences

Particulates may cause light scatter

The following substances can cause loss or retardation of colour development with minimum level of:

Thiosulphate: 10 mg/l

Sulphite: 2 mg/l

Iodides: 2 mg/l

Cyanides: 500 mg/l

Sulphide: 100 mg/l (solved by dilution into range)

High concentrations of lead ions may produce a falsely low reading for sulphide, as the lead complexes are not easily broken.